

Introduction - lab report example



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Introduction

Introduction Coral Reefs: Coral reefs are the most diverse and beautiful of marine habitats and are also known as " Rainforests" of the ocean. The formation of reef structures is aided by algae that are symbiotic with reef-building corals, known as zooxanthellae, Coralline algae, sponges, and other organisms. One of the most dominant is the sea anemone *Aiptasia pallida*, members of the phylum Cnidaria, which contains zooxanthellae. It is dark brown to translucent brown in colour. The brown colour comes from zooxanthellae. They're ecologically important and have a high biodiversity, which serves as a storage of rich genetic resources. Coral reefs are found in about 100 countries and are home to over 25% of marine population and are the world's most fragile ones. They are topographically complex. Thousands of species of fish and invertebrates live in association with reefs, because of their complexity. For example, hundreds of colonial invertebrate species are found living on the undersides of platy corals in Caribbean Sea.

Coral Bleaching: Coral bleaching is the whitening of diverse coral colonies. It happens as the reaction of the loss of symbiotic zooxanthellae, residing within corals, or a reduction in its photosynthetic pigments. Factors causing coral bleaching include various anthropogenic and natural variations in the environment including sea temperature, solar irradiance, sedimentation, xenobiotics, sub aerial exposure, inorganic nutrients, freshwater dilution, and epizootics. Coral bleaching is caused by both low as well as high levels of salinity. Low salinity level originates from sea water dilution that is a result of high precipitation events or storm runoff. High salinity levels are produced by the desalination plant operations. Copper accumulation is the dominant trait

of *Aiptasia pallida*. They are sensitive towards the relevant copper concentrations. Hence they may be useful in bio-monitoring of copper polluted environments. Hypothesis: ' The increase or decrease in level of salinity affects photosynthesis responses thus decreases the population of sea anemone *Aiptasia pallida*, containing zooxanthellae, resulting in increased bleaching.